

What is claimed is:

1. An apparatus for use with a printhead, comprising:
 - a cap configured to define a first opening and to have a sealing member that abuts the printhead;
 - a vent coupled to the first opening; and
 - a reservoir coupled to the cap via the vent and configured to be isolated from ambient as the sealing member abuts the printhead.
2. The apparatus of Claim 1, wherein the reservoir is configured to retain vapor from the printhead.
3. The apparatus of Claim 2, wherein the vent is configured to have a length and a cross-sectional area, and further wherein the length of the vent is greater than the cross-sectional area of the vent.
4. The apparatus of Claim 1, further comprising a humectant in the reservoir.
5. The apparatus of Claim 1, wherein the reservoir has a fixed volume.
6. The apparatus of Claim 1, in a printing device.
7. An apparatus for capping a printhead, comprising:
 - a diffusion path;
 - a first cavity having a first opening coupled to the diffusion path; and
 - a second cavity having a second opening coupled to the diffusion path and configured to communicate with the first cavity via the diffusion path;
 - wherein the diffusion path, first cavity, and second cavity are sealed from ambient during capping of the printhead.
8. The apparatus of Claim 7, wherein the second cavity is configured to store vapor from the printhead.

9. The apparatus of Claim 8, wherein the diffusion path is sized to help minimize loss of vapor from the second cavity when the printhead is uncapped.
10. The apparatus of Claim 7, further comprising a humectant in the second cavity.
11. The apparatus of Claim 7, wherein the second cavity has a fixed volume.
12. The apparatus of Claim 7, in a printing device.
13. A method for use in a printing device having a printhead, comprising:
 - capping the printhead;
 - diffusing pressure variations caused by capping into a fixed volume; and
 - sealing the printhead and fixed volume from ambient during capping.
14. The method of Claim 13, wherein the printing device includes a plurality of printheads and further comprising isolating each of the printheads from communication with one another.
15. The method of Claim 13, further comprising retaining vapor from the printhead in the fixed volume.
16. The method of Claim 15, further comprising limiting loss of vapor from the fixed volume.
17. An apparatus for use in a service station, comprising:
 - a plurality of caps each including an opening and each configured to engage a printhead during nonuse; and
 - a plurality of separate chambers each of which is coupled to a different cap via a different opening, each of which is isolated to receive vapor from a single printhead, and each of which is sealed from ambient during cap and printhead engagement.

18. The apparatus of Claim 17, wherein each chamber is configured to accommodate pressure variations occurring during cap and printhead engagement.
19. The apparatus of Claim 17, further comprising a plurality of conduits configured to couple the chambers to the caps.
20. The apparatus of Claim 19, wherein the conduits are configured to minimize loss of vapor during periods of printhead use.
21. The apparatus of Claim 19, wherein the conduits are the same length.
22. The apparatus of Claim 17, further comprising a humectant in each chamber.
23. The apparatus of Claim 17, in a printing device.
24. An apparatus for use in a printing device having a printhead that includes a plurality of nozzles, comprising:
 - means for protecting the printhead during periods of nonuse;
 - means for diffusing pressure variations occurring during engagement between the means for protecting and the printhead to help prevent nozzle depriming; and
 - means for isolating the printhead from ambient during engagement between the means for protecting and the printhead.
25. The apparatus of Claim 24, further comprising means for collecting vapor released from the printhead during engagement between the means for protecting and the printhead.
26. The apparatus of Claim 24, further comprising means for limiting loss of vapor from the means for collecting during use of the printhead.

105365-0100

27. A method for use in a printing device having a printhead that includes a plurality of nozzles, comprising:

- capping the printhead during periods of nonuse;
- diffusing pressure variations that occur during capping of the printhead; and
- isolating the printhead from ambient during capping of the printhead.

28. The method of Claim 27, wherein the printing device includes a plurality of printheads and further comprising isolating each of the printheads from communication with one another.

29. The method of Claim 27, further comprising collecting vapor released from the printhead during capping of the printhead.

30. The method of Claim 29, further comprising limiting loss of vapor collected from the printhead during capping.

4005366-011302